

**ATOMIC FORCE MICROSCOPE AND METHOD FOR DETERMINING  
PROPERTIES OF A SAMPLE SURFACE USING AN ATOMIC FORCE  
MICROSCOPE**

5

**ABSTRACT OF THE DISCLOSURE**

10       A method for determining properties of a sample surface  
using an atomic force microscope includes applying a first  
voltage between the sample and a probe, moving the probe  
towards the surface of the sample, and stopping movement of  
the probe towards the surface of the sample when current in  
the probe is initially detected. An oscillating magnetic  
field is applied to the probe such that the probe obtains  
stable contact with the surface of the sample.